Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (currently amended) An STS frame-ATM cell circuit emulation apparatus for cellularizing an STS-(NxM) frame formed by multiplexing M STS-N frames formed from different channels into ATM cells and multiplexing M different STS-N frames assembled from ATM cells into an STS-(NxM) frame, comprising:

circuit termination means for inputting and outputting frame data from and to a circuit;

buffer means for inputting and outputting an ATM cell sync signal and ATM cell data from and to an ATM switch; and

~~segmentation means and~~ reassembly means connected between said circuit termination means and said buffer means;

~~said circuit termination means outputting frame data from the circuit as a frame pulse signal and frame data to said segmentation means;~~

~~said segmentation means outputting the frame pulse signal and the frame data from said circuit termination means as an ATM cell sync signal and ATM cell data to said buffer means;~~

~~said buffer means temporarily storing and then outputting the ATM cell sync signal and the ATM cell data from said segmentation means to the ATM switch, said buffer means temporarily storing and then outputting the ATM cell sync signal and the ATM cell data from the ATM switch to said reassembly means;~~

said reassembly means for detecting a frame of an abnormal length from the ATM cell sync signal and the ATM cell data from said buffer means, compensating, when a frame of an

abnormal length is detected, for the ~~frame~~ abnormal length of the frame with <u>data from</u> a next

frame, and outputting a resulting frame as a frame pulse signal and frame data to said circuit

termination means.

2.   (currently amended) [[An]] <u>The</u> STS frame-ATM cell circuit emulation apparatus

as claimed in claim 1, wherein said reassembly means includes:

a VPI/VCI supervision section for supervising a VPI/VCI in an ATM cell header of the

ATM cell sync signal and the ATM cell data;

a structured pointer supervision section for supervising structured pointer information

indicating the top of an STS frame to detect an abnormal length of the frame;

a decellularization section for extracting an <u>administrative unit (AU)</u>-pointer value and

payload data values from an ATM payload in an ATM cell and decellularizing the AU-pointer

value and the payload data values for each frame; and

an AU-pointer rewriting section for compensating, when said structured pointer

supervision section detects an abnormal length of the frame, for the abnormal length of the frame

with the payload of the next frame and rewriting the AU-pointer value.

3.   (currently amended)   [[An]] <u>The</u> STS frame-ATM cell circuit emulation

apparatus as claimed in claim 2, wherein said VPI/VCI supervision section <u>is configured to:</u>

~~receives~~ <u>receive</u> the ATM cell sync signal and the ATM cell data inputted thereto from

the ~~ATM switch, identifying~~ <u>buffer means,</u>

<u>identify</u> data for the individual channels, and

~~outputting~~ output structured pointer values distributed for the individual channels to said

structured pointer supervision section~~, and said structured pointer supervision section detects the~~

~~structured pointer values of the individual channels, outputs the structured pointer values as~~

~~structured pointer information to said AU-pointer rewriting section, checks the frame length~~

~~based on the structured pointer values and transmits, when a frame of an abnormal length is~~

~~detected, an abnormal-length-frame signal to said AU-pointer rewriting section, whereafter said~~

~~AU-pointer rewriting section detects a data byte number corresponding to the abnormal length of~~

~~the frame based on the abnormal-length-frame signal and compensating for the frame length with~~

~~the payload of the next frame~~.

4.   (currently amended)   [[An]] The STS frame-ATM cell circuit emulation

apparatus as claimed in claim [[3]] 13, wherein, when said AU-pointer rewriting section

compensates for the ~~frame~~ abnormal length with the payload data of the next frame, said AU-

pointer rewriting section is configured to rewrite ~~rewrites~~ the AU-pointer value for [[the]] frames

next to the frame with which the abnormal length is detected.

5.   (currently amended)   [[An]] The STS frame-ATM cell circuit emulation

apparatus as claimed in claim [[3]] 1, wherein the frame of the abnormal length is a short frame

or a long frame.

6.   (currently amended) A frame length compensation method for an STS frame-

ATM cell circuit emulation apparatus for cellularizing an STS-(NxM) frame formed by

multiplexing M STS-N frames formed from different channels into ATM cells and multiplexing

M different STS-N frames assembled from ATM cells into an STS-(NxM) frame, comprising ~~the~~

~~steps of~~:

~~outputting frame data from a circuit received by circuit termination means as a frame~~

~~pulse signal and frame data to segmentation means;~~

~~outputting the frame pulse signal and the frame data from said circuit termination means~~

~~as an ATM cell sync signal and ATM cell data to buffer means;~~

~~temporarily storing into said buffer means and then outputting the ATM cell sync signal~~

~~and the ATM cell data from said segmentation means to an ATM switch;~~

receiving an ATM cell sync signal and ATM cell data from an ATM switch;

temporarily storing ~~into said buffer means~~ and then outputting [[an]] the ATM cell sync

signal and ATM cell data ~~from the ATM switch to said reassembly means~~; [[and]]

detecting a frame of an abnormal length from the ATM cell sync signal and the ATM cell

data[[,]];

compensating, when a frame of an abnormal length is detected, for the ~~frame~~ abnormal

length of the frame with data from a next frame to form a resulting frame; ~~by said reassembly~~

~~means~~ and

outputting [[a]] the resulting frame ~~as a frame pulse signal and frame data from said~~

~~reassembly means to said circuit termination means~~.

7.   (currently amended) [[A]] The frame length compensation method as claimed in

claim 6, wherein ~~said reassembly means~~ detecting a frame of an abnormal length includes:

supervises supervising a VPI/VCI in an ATM cell header of the ATM cell sync signal and

the ATM cell data[[;]], and

supervises supervising structured pointer information indicating the top of an STS frame

to detect an abnormal length of the frame;

extracts an AU-pointer value and payload data values from an ATM payload in an ATM

cell and decellularizes the AU-pointer value and the payload data values for each frame; and

compensates, when an abnormal length of the frame is detected, for the abnormal length

of the frame with the payload of the next frame and rewrites the AU-pointer value.

8.   (currently amended) [[A]] The frame length compensation method as claimed in

claim [[7]] 14, wherein at least one of detecting a frame of an abnormal length or compensating

for the abnormal length of the frame includes:

the ATM cell sync signal and the ATM cell data inputted from the ATM switch are

received and identifying data for the individual channels, are identified and then

outputting structured pointer values distributed for the individual channels are outputted,

[[and]] detecting the structured pointer values of the individual channels, are detected and

checking the frame length is checked based on the structured pointer values and then,

when a frame of an abnormal length is detected, generating an abnormal length frame

signal is generated,

whereafter detecting a data byte number corresponding to the abnormal length of the

frame is detected based on the abnormal length frame signal, and

compensating for the ~~frame~~ abnormal length ~~is compensated for~~ with [[the]] a payload of the next frame.

9.   (currently amended) [[A]] The frame length compensation method as claimed in claim 8, ~~wherein, when the frame length is compensated for with the payload data of the next frame,~~ wherein at least one of detecting a frame of an abnormal length or compensating for the abnormal length of the frame further includes rewriting the AU-pointer value for [[the]] frames next to the frame with which the abnormal length is detected ~~is rewritten~~.

10.   (currently amended) [[A]] The frame length compensation method as claimed in claim [[8]] 6, wherein the frame of the abnormal length is a short frame or a long frame.

11.   (new) The STS frame-ATM cell circuit emulation apparatus as claimed in claim 1, further comprising:

segmentation means connected between said circuit termination means and said buffer means;

said circuit termination means outputting frame data from the circuit as a frame pulse signal and frame data to said segmentation means;

said segmentation means outputting the frame pulse signal and the frame data from said circuit termination means as an ATM cell sync signal and ATM cell data to said buffer means; and

said buffer means temporarily storing and then outputting the ATM cell sync signal and

the ATM cell data from said segmentation means to the ATM switch.

12.   (new) The STS frame-ATM cell circuit emulation apparatus as claimed in claim

3, wherein the structured pointer supervision section is configured to:

detect the structured pointer values of the individual channels,

output the structured pointer values as structured pointer information to the AU-pointer

rewriting section,

check the frame length based on the structured pointer values, and

transmit, when a frame of an abnormal length is detected, an abnormal length frame

signal to the AU-pointer rewriting section.

13.   (new) The STS frame-ATM cell circuit emulation apparatus as claimed in claim

12, wherein the AU-pointer rewriting section is configured to:

detect a data byte number corresponding to the abnormal length of the frame based on the

abnormal length frame signal, and

compensate for the abnormal length with a payload of the next frame.

14.   (new) The frame length compensation method as claimed in claim 7, wherein

compensating for the abnormal length of the frame includes:

extracting an administrative unit (AU)-pointer value and payload data values from an

ATM payload in an ATM cell,

decellularizing the AU-pointer value and the payload data values for each frame,

compensating, when an abnormal length of the frame is detected, for the abnormal length

of the frame with a payload of the next frame, and

rewriting the AU-pointer value.

15.   (new) An STS frame-ATM cell circuit emulation apparatus for cellularizing an

STS-(NxM) frame formed by multiplexing M STS-N frames formed from different channels into

ATM cells and multiplexing M different STS-N frames assembled from ATM cells into an STS-

(NxM) frame, comprising:

a buffer section to receive an ATM cell sync signal and ATM cell data from an ATM

switch; and

a reassembly section connected to the buffer section and configured to:

detect a frame of an abnormal length from the ATM cell sync signal and the ATM

cell data from the buffer section,

compensate, when a frame of an abnormal length is detected, for the abnormal

length of the frame with data from a next frame to form a resulting frame, and

output the resulting frame.